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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/236,897	01/26/1999	AKIHIRO KOMATSU	Q53086	9842

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EXAMINER	
CROSS, LATOYA I	

ART UNIT	PAPER NUMBER
1743	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/236,897	KOMATSU	
	Examiner	Art Unit	
	LaToya I. Cross	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-6 and 8-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 2, 4-6, 8-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to Applicants' amendments filed on April 22, 2005. Claims 1, 2, 4-6, 8-33 are pending. Claims 24-33 are newly added claims.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Oflice action.

2. Claims 1, 2 5, 6 and 9-28, 30-32 are rejected under 35 U.S.C. 1O.5(a) as being unpatentable over US Patent 4,296,069 to Smith et al in view of US Patent 6,180,061 to Bogen et al and US Patent 5,059,393 to Quenin et al.

Smith et al '069 disclose an apparatus for processing analysis slides in a chemical analyzer. The apparatus comprises a first meter device (18) for metering (spotting) sample fluid from sample cups on a sample tray onto an analysis slide of the colorimetric type. A second meter device is provided to deposit sample and reference fluid onto analysis slides of the potentiometer type (col. 3, lines 40-45). Incubators (22, 24) are provided to function with analysis means (23, 25) (equivalent to Applicants' claimed concentration measuring means). The analysis means measure a change in the analysis slides as a result of the fluid being deposited thereon (col. 4, lines 40-45). Results from the analysis means (25) may be transmitted to a computer for appropriate

calculations of concentration for various samples (col. 7, lines 53-58). Control circuits are provided which include thermistors for controlling the temperature of various heating elements (col. 4, lines 28-37). The thermistors are equivalent to Applicants' claimed temperature control means. With respect to amended claim 9 and new claim 24, Smith et al teach a spring retainer (88) for holding the analysis slide in position before moving to the incubator. After in the incubator, the slide is held in place by clips (100). Also disclosed are housings (14, 16) where analysis slides are supplied and moved between the incubator (24) and analysis means (25), via a slide transfer mechanism (128). The housings (14, 16) are equivalent to Applicants' claimed chemical analysis element supply section, recited in claims 2 and 6. The slide transfer mechanism (128) is equivalent to Applicants' claimed conveyer means recited in claims 2 and 6. Further, with respect to 21-23, the slide transfer mechanism (128) is capable of removing a slide from read station and either returning the slide to the incubator (24) or discarding the slide, depending on whether endpoint analysis has been performed (col. 6, line 57 - col. 7, line 6). The position of the analysis slide is detected by means of an optical sensor (col. 6, lines 33-36). Also disclosed by Smith et al is the additional use of an ion activity measuring means comprising electrodes selective to ion activity (col. 3, lines 12-15), as recited in claims 1, 5, 9 and 16.

Smith et al fail to teach 1) a single incubator for receiving and holding all the analysis elements and maintaining a constant temperature for the analysis slides, and wherein the incubator may simultaneously maintain different temperatures for different slides and 2) a bar code reader for detection of the position of the analysis slides by way of reading a bar code on the slides.

With respect to the single incubator, Bogen et al teach an apparatus for stain processing analysis slides. The apparatus of Bogen et al is similar to that of Smith et al in that it functions as an automatic device for preparing slides for analysis. The device of Bogen et al comprises a slide rotor having multiple slide frames capable of holding slides in different slide positions, i.e. for receiving and storing multiple analysis slides, as recited in claims 10, 11, 13, 14, 17 and 18. See col. 5, lines 56-61. Each slide frame has a slide frame base having heating areas under each of the slide positions. The heating elements are formed into the slide frame base. Because each slide has its own heating element, the slides can be maintained at different temperatures simultaneously, as recited in claims l 1, 12, 14, 15, 18 and 19. The slide rotor along with the individualized slide frames and heating elements constitute a single incubator for multiple slides, as recited in claims 1, 5, 9 and 16. See col. 5, line 61 - col. 6, line 21. It would have been obvious to one of ordinary skill in the art to modify the two-incubator system of Smith et al and use a single incubator for multiple slides (as disclosed by

Bogen et al) because such would provide more efficient operation where multiple slides need to be analyzed. The incubator described in Smith et al allows only two slides to be heated, whereas the incubator of Bogen et al allows multiple slides to heated and also allows individualized heating, so that temperature conditions of one slide will not affect the temperature conditions of another. Therefore, multiple slide processing may take place even where each slide is being processed differently.

With respect to a detector comprising a bar code reader, as recited in claims 1, 5, 9, 16 and 20, Smith et al teaches using an optical source to detect the position of the slides (col. 6, lines 33-36 of Smith et al). Quenin et al teach an analyzer similar to that of Smith et al and Bogen et al where bar codes are disposed on each analysis slide. A bar code reader is provided to determine the kind of slide moving toward the dispensing station and also determine the position of the slide (col. 4). It would have been obvious to one of ordinary skill in the art to modify Smith et al by using a bar code reader to determine the position of the slides instead of an optical source, because in addition to determining the position of the slides, other useful information about the slide, such as type, can be determined when bar codes are used. Using bar codes will also provide a manner of keeping track, by way of computer data, of the analyses taking place in the automatic system.

Therefore, for the reasons set forth above, Applicants' claimed invention is deemed to be obvious, within the meaning of 35 USC 103, in view of the teachings of Smith et al, Bogen et al and Quenin et al.

3. Claims 4, 8, 29 and 33 are rejected under 35 U.S.C. 1O3(a) as being unpatentable over Smith et al, Bogen et al and Quenin et al as applied to claims 1, Q, 5, 6 and 9-Q0 above, and further in view of US Patent 5,814,277 to Bell et al.

With respect to claims 4 and 8, neither Smith et al, Bogen et al nor Quenin et al teach a diluting unit in the analysis systems. Bell et al teach an automatic chemical analyzer comprising sample and reagent containers (22, 24). Aliquots of sample and reagent are drawn up from the chambers and dispensed into test cells.
Bell et al disclose that the samples may be diluted automatically by dispensing buffer solution from reservoir (52) into the test cells. The automatic dilution of sample is disclosed as being advantageous when the sample concentration is too high or when limited amounts of sample are available for testing. Automated dilution also eliminates the potential for user error in sample dilution. See col. 9, lines 10-18.

It would have been obvious to one of ordinary skill in the art to use a diluting unit in the system of Smith et al to allow analysis even where the sample size is small. Also, it would have been obvious to the ordinarily-skilled artisan to use an automatic dilution system to reduce user error and increase the efficiency of the operation.

Therefore, for the reasons set forth above, Applicant's claimed invention is deemed to be obvious, within the meaning of .55 USC 103(a) in view of the teachings of Smith et al, Bogen et al and Quenin et al and further in view of Bell et a1.

Response to Arguments

1. Applicant's arguments filed April 22, 2005 have been fully considered but they are not persuasive.

With respect to the obviousness rejection over Smith et al, Bogen et al and Quenin et al, Applicants argue 1) there is no motivation to substitute the bar code reader of Quenin et al for the optical sensor of Smith et al and 2) the reference(s) fail to teach automatically holding the first and second chemical analysis elements at predetermined temperatures.

With respect to the bar code reader, Quenin et al teach that a chemical analyzer comprising, inter alia, a bar code reader that reads bar code labels on the analysis elements as they move toward the fluid dispensing station. Quenin et al further comments that such bar code readers are capable of reading the type of slide and are well known in the art. See col. 4. Smith et al uses an optical sensor to determine the position of analysis element in the chemical analyzer. The Examiner has argued that it would have been obvious to one of ordinary skill in the art to substitute the optical

sensor of Smith et al for the bar code reader of Quenin et al. Applicants argue lack of motivation to do so. In response, the Examiner notes several reasons why one of ordinary skill in the art would opt to use a bar code reader over an optical sensor. First, the bar code reader, as stated in Quenin et al, provides the additional advantage of being able to determine information about the slide that is not possible with an optical sensor. For example, the type of slide, type of sample, origin of sample and previous analyses performed are all bits of information that user would likely want to know about a slide containing a sample. A bar code reader would allow the user to have access to such information, whereas an optical sensor would not. Further, it is well known in the art of chemical analyzer, as Quenin et al as pointed out, that the use of bar code readers in chemical analyzers is conventional. Applicants' have not invented a chemical analyzer that contains a bar code reader.

With respect to the temperature control means, the rejection as given in the previous Office Action and restated above, does not acknowledge that Smith et al and Bogen et al fail to teach a temperature control means. The rejection points out that Smith et al teaches a chemical analyzer having thermistors for controlling the temperature of the heating elements in the incubator. Smith et al teach that the thermistors regulate the heaters for maintaining the incubator chambers at constant temperature. Further, the reference teaches that multiple thermistors may be present

throughout the system (col. 4, lines 28-37). With respect to the temperature control means operating automatically, Smith et al teach that the control circuits control the thermistors. Further, the entire system of Smith et al is automated.

Applicants further argue the incubator means, stating that the Bogen et al reference fails to teach that the incubator is capable of holding a temperature for measuring ionic activity and holding a temperature for measuring optical density. Bogen et al teach an incubator having multiple slide frames for holding multiple analysis slides. Each slide frame has its own heating elements so the slides can be maintained a different temperatures. Thus, each slide can be heated to a suitable temperature for carrying out each step in the analysis. Applicants' use of the phrase "automatically" does not distinguish the claims from the teachings of Bogen et al. The heating process of the incubator of Bogen et al is done automatically, given the dictionary definition of the word (done by a machine). Although user input may be needed in the initial steps, the heating process takes place "automatically".

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya I. Cross whose telephone number is 571-272-1256. The examiner can normally be reached on Monday-Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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